WHAT IS CLAIMED IS :

1. A fuel cell sensor for detecting oxidisable gases, comprising working and counter electrodes, and a catalyst disk adapted to chemically oxidise gases on a counter electrode side of said counter electrode opposite a working electrode side thereof for reducing an amount gases that will reach said counter electrode from said counter electrode side.

2. A fuel cell sensor as defined in Claim 1, wherein said catalyst disk is made from the powders of 0.5-10 % Pd and/or Pt load on activated carbon or alumina.

3. A fuel cell sensor as defined in Claim 1, wherein said catalyst disk is made from the powders of transition metal oxides.

4. A fuel sensor as defined in Claim 1, wherein a protection membrane in front of said working electrode is made of dense polymer membrane of PTFE, or PVDF or PP with a thickness between 5 and 50 microns.

5. A fuel cell sensor as defined in Claim 1, wherein a protection membrane in front of said counter electrode is made of dense polymer membrane of PTFE, or PE or PP with a thickness between 20 and 100 microns.

6. A fuel cell sensor for detecting oxidisable gases, comprising working and counter electrodes, and a low impedance fuel cell adapted to electro-chemically oxidise gases on a counter electrode side of said counter electrode opposite a working

electrode side thereof for reducing an amount gases that will reach said counter electrode from said counter electrode side.

7. A fuel cell sensor as defined in Claim 6, wherein said low impedance fuel cell has combined internal and external impedance lower than 100 ohms.

8. A fuel sensor as defined in Claim 6, wherein a protection membrane in front of said working electrode is made of dense polymer membrane of PTFE, or PVDF or PP with a thickness between 5 and 50 microns.

9. A fuel cell sensor as defined in Claim 6, wherein a protection membrane in front of said counter electrode is made of dense polymer membrane of PTFE, or PE or PP with a thickness between 20 and 100 microns.

10. A fuel cell sensor for detecting oxidisable gases, comprising working and counter electrodes, a protection membrane in front of said working electrode and made of dense polymer membrane of PTFE, or PFA or PVDF with a thickness between 5 to 50 microns, and a protection membrane in front of said counter electrode and made of oxygen ion/electronic mixed-conducting ceramic dense membranes, i.e. perovskite phase of composition $La_{1-x}A_xFe_{1-y}Co_yO_3$ (A=Ba, Ca, Sr).

11. A fuel cell gas sensor for detecting gases, comprises a housing in which are mounted a working electrode, an electrolyte, a counter electrode, first and second protection membranes located upstream respectively of said working and counter electrodes,

respective contacts for said working and counter electrodes, and a gas reducer adapted to change a concentration of the gases to be detected by said gas sensor passing through said second protection membrane before reaching said counter electrode.

12. A fuel cell gas sensor as defined in Claim 11, wherein said gas reducer comprises a catalyst disk placed between said counter electrode and said second protection membrane, said second protection membrane being adapted to slow down the flux of gases onto said counter electrode, said catalyst disk being adapted to chemically modify a concentration of the gases to be detected that permeate through said second protection membrane.

13. A fuel cell gas sensor as defined in Claim 11, wherein said gas reducer comprises a low impedance fuel cell placed between said counter electrode and said second protection membrane, said second protection membrane being adapted to slow down the flux of gases onto said counter electrode, said fuel cell being adapted to electrochemically modify a concentration of the gases to be detected that permeate through said second protection membrane.

14. A fuel cell sensor as defined in Claim 3, wherein said powders of transition metal oxides include a highly active CuO/MnO_2 mixture known as Moleculite.